

REMARKS

This paper is filed in response to the Office Action mailed October 20, 2003 in which claims 1-37 were pending in the above-referenced application. Claims 8, 9, 14, 17, 28, and 37 remain withdrawn from consideration. Claims 1-7, 10-13, 15, 16, 18, 19, 22-24, and 26-27 were rejected. Claims 29-36 were allowed and claims 20, 21, and 25 were objected to as dependent upon a rejected base claim.

By this paper, claims 1, 8-9, 11, 14, 18 and 29 have been amended. Claims 38-57 have been added including independent claims 38-40, 43, 46, 52 and 57.

Note that the scope of the new claims cover the non-elected species. More specifically, like independent claims 1 and 18, all of the newly added independent claims are generic to Groups I and II identified in the Restriction Requirement. Also, like independent claims 1, 18 and 29, all of the newly added independent claims are generic to Groups A and B identified in the Restriction Requirement. The dependent claims added by this amendment read on all of the species.

Applicant extends appreciation to the Examiner for the Interview conducted with Applicant's undersigned attorney on March 15, 2004. The amended independent claims 1 & 18 include the limitations discussed in the Interview. As discussed at the Interview, the limitations regarding the non-penetration of the vessel has been deleted from independent claims 1, 18 and 29.

At the Interview, it was agreed that the claims initially rejected under 35 U.S.C. § 112 ¶ 1 meet the requirements of 35 U.S.C. § 112 ¶ 1. None of the prior art references show a first compression plate having first holding means "shaped to hold

the first vessel portion in a configuration such that when the first vessel portion and the second vessel portion are anastomosed together there is an uneven distribution of force against the first vessel portion caused by the shape of the first holding means.” Based on at least this feature and the other recited features discussed in the Interview, claim 1 is patentable over the prior art.

Claim 18 recites that the “holding tabs extending from the ring of the first compression plate define a first compression plate opening.” Claim 18 also recites that “the ring and the holding tabs are adapted to enable the portion of the first vessel defining the first vessel opening to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimetrical shape of the first compression plate opening.” These recitations of the structure of the holding tabs and other features of the compression plate anastomosis apparatus distinguish the apparatus from prior art devices as none of the prior art devices have holding tabs which define a first compression plate opening and which enable the first vessel opening to conform to the perimetrical shape of the first compression plate opening. For example, the rim of tubes 10 and 11 disclosed in U.S. Patent No. 1,151,300 issued to Soresi define the tube openings and not hooks 20 and 21. Similarly the openings of the flange portions 1 and 2 of the device disclosed in U.S. Patent No. 4,233,981 issued to Schomacher are defined by the respective inner diameters of the flange portions and not by pins 3 and 6. The device disclosed in U.S. Patent No. 3,774,615 issued to Lim also lacks holding tabs which could be construed as defining a first compression plate opening and which enable the first vessel opening to conform to the perimetrical shape

of the first compression plate opening. It was asserted in the Office Action that the threads identified in figure 4 of Lim could act as holding tabs. Based on the position of the threads, the threads cannot define the first compression plate opening and do not permit first vessel opening to conform to the perimetrical shape of the first compression plate opening. On at least this basis, claim 18 is patentable over the prior art.

Claim 18 has also been amended as discussed in the Interview to recite that the first vessel portion is at least partially everted around the holding tabs. As referenced above, it was asserted in the Office Action that the threads identified in figure 4 of Lim could act as holding tabs. Everting the first vessel around the threads in Lim would likely prevent the threads from being joined together. Lim does not teach or suggest the partial eversion of the first vessel portion around the holding tabs. For this additional reason, claim 18 is patentable over Lim and the other prior art.

The added independent claims were not presented at the Interview. However, both claims 38 and 39 include a limitation like the limitation recited in claim 1 regarding the “uneven distribution of force.” Note that claims 38 and 39 do not include elements recited in means-plus-function format in accordance with 35 U.S.C. § 112 ¶ 6 as does claim 1. For example, claims 38 and 39 recite locking components instead a locking means. Examples of the locking components are provided in the Substitute Specification at page 66, lines 10-23 and at page 72, lines 6-13. These examples include the mated locking arms and extensions described in reference to Figures 12A-12G. Other examples include the frictional engagement of guides extending from one

plate and appropriately sized apertures in the opposite plate or the use of barbs on the guides.

As indicated above, none of the prior art references show a compression plate having holding tabs which result in “an uneven distribution of force” as recited in claims 38 and 39. Also, none of the prior art references show a compression plate with holding tabs which define a first compression opening. Further, none of the prior art references disclose a first compression plate having a plurality of holding tabs which “are shaped to enable a portion of a first vessel defining a first vessel opening to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimeter of the first compression plate opening as the first vessel portion is held by the plurality of holding tabs extending from the ring of the first compression plate.” Based on the above, claims 38 and 39 are patentable.

Claim 40 includes elements recited in means-plus-function format in accordance with 35 U.S.C. § 112 ¶ 6. Like claim 1, claim 40 recites locking means. Claim 40 also recites that the “first holding means defines a first compression plate opening having a perimeter. It is further recited in claim 40 that the “first holding means is shaped to enable the first vessel portion to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimeter of the first compression plate opening as the first vessel portion is held by the first holding means.” As discussed above, such a configuration is not taught or suggested by the prior art.

None of the prior art references have holding means as described in claim 40 “adapted to hold the first vessel portion by eversion around the first holding means at

least partially around the perimeter of the first compression plate opening.” As noted above, it was asserted in the Office Action that the threads identified in figure 4 of Lim could act as holding tabs. Lim does not teach or suggest eversion of the first vessel portions around its threads for the reasons discussed above.

Claim 40 also recites that the “first holding means is adapted to hold the first vessel portion by eversion around the first holding means at least partially around the perimeter of the first compression plate opening and not by reliance on penetration of the first vessel portion by the first holding means.” Support for this limitation is found in the Substitute Specification at page 60, lines 12-13; page 60, lines 15-16; page 61, line 21 to page 62, line 4; page 62, lines 14-17; page 64, lines 25-27; page 69, lines 14-17; page 70, lines 6-11; and at page 71, lines 9-20. Support is also found in FIGS. 3B, 4A-4D, 5A, 12A-12G, and in 15B-15C. While the claimed apparatus may result in inadvertent penetration through or into the first vessel portion, it is clear that the first vessel portion is held by “eversion around the first holding means at least partially around the perimeter of the first compression plate opening and not by reliance on penetration by of the first vessel portion by the holding means.” This limitation further distinguishes the claimed invention from the devices in the prior art such as those disclosed in U.S. Patent No. 4,233,981 issued to Schomacher, U.S. Patent No. 4,233,981 issued to Soresi and U.S. Patent No. 3,254,650 issued to Collito which hold a vessel by reliance on features which penetrate through or at least into the vessel. Note that some embodiments in Collito do not rely on penetrating features, however, they do not teach or suggestion eversion around holding means for holding the first vessel

portion. For these additional reasons, claim 40 is patentable over the prior art.

Claim 43 contain limitations which are similar to those recited in claim 40. Note, however, that claim 43 does not include elements recited in means-plus-function format in accordance with 35 U.S.C. § 112 ¶ 6 like claim 40. For example, claim 43 include recitations of locking components like claims 38 and 39 instead of locking means as recited in claim 40.

Claim 43 recites that “the plurality of holding tabs are adapted to hold the first vessel portion by eversion over the holding tabs at least partially around the perimeter of the first compression plate opening and not by reliance on penetration by the holding tabs through the first vessel portion.” As discussed above, this limitation distinguishes the devices disclosed in the prior art which rely on penetration to hold the vessel. The limitation also distinguishes references which do not rely on penetrating features such as Collito and Lim to hold vessels. For example, the devices in Collito do not have holding tabs extending from a ring as is recited in claim 43.

The holding tabs recited in claim 43 are also distinguished from the threads disclosed by Lim. Claim 43 recites that the holding tabs define a first compression opening and that the holding tabs “are shaped to enable a portion of a first vessel defining a first vessel opening to extend through the first compression plate opening in a manner such that the first vessel opening conforms to the perimeter of the first compression plate opening as the first vessel portion is held by the plurality of holding tabs.” As mentioned above with regard to claim 18, the position of the threads in Lim prevents the threads from defining the first compression plate opening and do not

permit “the first vessel opening to conform to the perimeter of the first compression plate opening as the first vessel portion is held by the plurality of holding tabs.” Further, eversion of the first vessel over the threads in Lim would likely prevent the threads from being joined together. On this basis, claims 43 and 46 are patentable over Lim and the other prior art references.

Dependent claim 41 references the locking means recited in claim 40 while claim 44 references the locking components recited in claim 43. These dependent claims recite that the first compression plate and the second compression plate are locked together without penetrating through the first vessel. Support for this limitation is found in the Substitute Specification at page 68, lines 14-18 and at page 72, lines 6-13. Support is also found in FIGS. 3B, 4A-4D, 5A, 12A-12G and in 15B-15C.

Dependent claim 42 recites that the holding tabs are configured to enable the eversion of the first vessel portion to expose the interior surface (the intima) of the first vessel portion to the second vessel portion. Dependent claim 45 recites that the holding tabs are configured to enable the eversion of the first vessel portion to expose the interior surface of the first vessel portion to the second compression plate. Support for these claims is found in the Substitute Specification at page 46, lines 10-22 and in FIGS. 4A-4D, 12A-12G and in 15B-15C.

Independent method claims have also been added including claims 46, 52, and 57. These claims are patentable for many of the reasons discussed above. For example, one of the unique elements in claim 46 includes the recitation regarding “the uneven distribution of force”. An example of one of the patentable steps recited in claim

52 is: “everting the first vessel portion over the plurality of holding tabs at least partially around the perimeter of the first compression plate opening in a manner such that the first vessel opening conforms to the perimeter of the first compression plate opening as the first vessel portion is held without relying on penetration of the first vessel portion by the plurality holding tabs.”

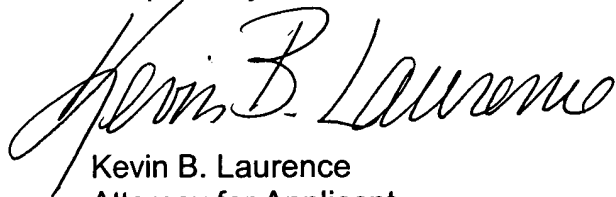
Claim 57 recites that the “first and second compression plate have configurations which cause an uneven distribution of force against the first vessel portion and the second vessel portion as the first vessel portion and the second vessel portion are held between the first compression plate and the second compression plate after the first vessel portion and the second vessel portion are anastomosed together.” Claim 57 also recites that: “everting the first vessel portion at least partially around the perimeter of the first compression plate opening in a manner such that the first vessel opening conforms to the perimeter of the first compression plate opening as the first vessel portion is held without relying on penetration of the first vessel portion.

Support for claims 50 and 55 is found in Substitute Specification at page 64, line 7 to page 65, line 13. Support for the limitations recited in the other method claims has already been identified. The prior art does not teach or suggest the inventions claimed in the method claims.

In view of the foregoing, it is believed that all of the claims are patentable in their present form, and a prompt notice of allowance for this case is respectfully requested. As mentioned above, if the Examiner finds any remaining impediment to the prompt allowance of this application, please contact the undersigned attorney.

DATED this 23RD day of MARCH 2004.

Respectfully submitted,

A handwritten signature in black ink, reading "Kevin B. Laurence". The signature is written in a cursive style with a large, stylized "K" and "L".

Kevin B. Laurence
Attorney for Applicant
Registration No. 38,219

STOEL RIVES LLP
One Utah Center
201 South Main Street, Suite 1100
Salt Lake City, UT 84111
Telephone: (801) 578-6932
Facsimile: (801) 578-6999

CUSTOMER NO. 32642